

GREAT LAKES TECHNOCRAT

25c **NOVEMBER-DECEMBER, 1943** **25c**

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GREAT LAKES TECHNOCRAT

NOVEMBER-DECEMBER, 1943 ★ VOL. II ★ NO. 7 ★ WHOLE NO. 64

★ Illustrating the Futility of Price System Methods of Operation; Interpreting the Trend of Events from the Social Aspect of Science; and Presenting the Specifications for Total Victory in America's War Against Fascism. ★

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We're Afraid of Tomorrow

by Robert Bruce

The greatest disaster that could befall certain interests in America today would be a sudden outbreak of peace. For them it would be calamity; even for the nation as a whole, with our internal social problems still unsolved, we are, psychologically, almost totally unprepared for the victory that is coming and for the peace which will follow. We merely hope for the best as we struggle and muddle along.

Age of Natural Scarcity

FOR the last 7,000 years the world as a whole has been in a state of natural scarcity of goods and services. By this we mean the sum total of the things whereby men live, such as food, clothing, shelter, health, personal and group security and the thousand and one concomitant accessories to civilized social life were either nonexistent or else to be had only in limited quantities and under precarious circumstances.

The rate of output in all national economies of the past was limited to what could be produced by human toil and hand tools. Consequently there was never enough to go around. This is readily understandable when we recall that the production of any usable article requires the application of power, plus techniques of fabrication, to the raw materials of nature.

During the past 70 centuries, until recently, the only source of power available to man was the power generated by his own body and those of work animals, plus the crude utilization of wind and water power. The only techniques in use were those handicraft methods which had been developed by the use of hand tools. No matter how skillful the handicraft technique might become, the rate of production of physical articles was always geared down to the power output of the human engine operating the hand tool. Only so much could be produced. This was never enough to assure all the human components involved a sufficiency of physical goods and services. Technocracy has aptly called this long period the *Age of Scarcity* because all national economies in their internal operations were economies of natural scarcity.

Always Plenty of War

While during this long static age of yesterday's 7,000 years there was always a scarcity of the means whereby men live and prosper, there was always a suffocating abundance of the means whereby they perish, such as toil, hunger, poverty, ignorance, disease and war. Countless generations passed from the cradle to the grave without hope or opportunity to better their condition. But there was always the glory of war. Wars were waged for a myriad of reasons which can be summarized as hav-

ing been for god, greed and gold. In any scarcity economy war is good business, all around.

Since 1600 B. C. down to today the world as a whole has experienced less than 330 years of peace. This means that during the last 35 centuries mankind has been waging war somewhere or other more than 90 percent of the time. The other 10 percent was devoted to recuperating. After all, our forbears had to rest up once in a while. In spite of all the protestations of poets, philosophers and moralists, mankind has resorted to war again and again. The record shows that the trinity of private enterprise, politics and ecclesiasticism, which has composed the leadership of human society in the last 35 centuries, has demonstrated its leaning toward war and its inability to organize for peace. The intermittent periods between wars have been in effect only periods of armistice during which we prepared to resume our normal habits of homicide. The last such period began at 11 a.m., November 11, 1918, and lasted 21 years until September 1939. It is called the 'long armistice.'

When the fighting stopped on the Western Front that November morning, Marshal Foch is reported to have said: 'The armies will now come to rest for 20 years.' With the exception of a few warmup wars in between this was an accurate prediction.

A Different Kind of War

America is now in the very midst of that apparently normal condition of human living (and dying) called war. Counting in the numerous Indian

wars we have waged to dispossess the original inhabitants of this continent, this is our umpteenth war. However, this war is different.

It is a war for survival; it is the first total war in all history; and it was forced upon America by that tripartite conspiracy of clericalism, party politics and business called fascism.

The record shows that the great bulk of American citizens were sound asleep in the midst of their unsolved internal social problems when the Japanese bombs awoke them to the pressing danger of outside aggression, on December 7, 1941. At that time America was lousy with isolationist and pro-fascist groups. Every sniping one of them did its best to keep America from preparing for war. This was their program in spite of the self-evident aggression of foreign powers. They tried hard to confuse and divide America and thus prevent any preparation for defense until it would be too late. A few have been imprisoned but the majority are still at large and still sniping away at America. Every member of these native pro-fascist groups, together with their domestic sponsors, are guilty of Continental treason and should be liquidated.

To say that this war was forced upon America is a truism. But the physical causes behind the world trend of fascism are not understood as yet by the average man. During all of recorded history until the beginning of the industrial revolution the world was in a static state of progression. Nothing fundamental

ever changed much from one century to the next. To be sure, kingdoms and empires rose and fell; civilizations waxed and waned; poets, philosophers and great religious teachers made their mark in the written records and mythology of man. Countless wars were waged, each one a dreary repetition of its predecessors. Foot soldiers marched along the plodding path of empire, living off the countries they invaded and fabricating their own swords, shields, bows and arrows and other simple mechanical devices of war. The horse was used to some extent but not as a transport animal until the invention of the collar and hame in the 13th century.

Handicraft Economy, Handicraft War

During this static period the wars that were waged reflected the steady state of the industrial arts in the countries concerned. Since this was universally a hand-tool, human-toil, agrarian handicraft type of economy, the wars were mainly hand to hand contests of skill, valor, endurance, strategy, and tactics. Remember Horatio at the bridge; William Tell and the Apple; Richard the Lion Hearted.

While, as we have indicated, there were many political, financial and ecclesiastical changes during the static age these were only superficial alterations in the social superstructure of society. The means whereby men lived remained the same. Consequently, while the control over society shifted every so often from one set of oligarchs to another, the general pattern also remained the same.

During this long static age of scarcity there was a slow growth of knowledge concerning the laws of this physical world. This fund was contributed to by countless known and unknown men. Who discovered the wheel? Who first used a lever? Who worked out the smelting of iron ore? In time the general fund of knowledge and its utilization reached a point that made possible and necessary an increased efficiency by the application of better techniques and more power. The first hesitant steps of technology began in the dim past. Eventually this trend flowered into the beginning of the Industrial Revolution. This was the biggest fundamental change in the means whereby men lived. It raised the output of goods and services and thus permitted an increased population to exist. The year 1800 found the Western World facing directly into a new social order encumbered with the traditions, customs and folkways built up during 7,000 years of natural scarcity. Social controls were held securely, as they had been for ages, by the trinity of politics, finance and ecclesiasticism.

War Comes of Age

The introduction of steam power, the factory system of manufacture and the use of metals required ever more and more raw materials. Thus began the race for empire. Nearly all of the backward nations were invaded, conquered and colonized in the search for natural resources. By the year 1900 a sort of equilibrium had been reached. The world was pretty well

divided up. Those western nations such as Germany and Italy which entered the race for empire last were able to conquer the least. So it was with Japan. It was in those nations which developed last, including Japan, that the social hangover of the static age was the strongest. Those countries which developed farther in the industrial revolution did so because their ancient boundaries plus their modern conquests contained more natural resources. America has the lion's share of the world's natural resources. Consequently its technology has developed the most.

As we trace the art of organized combat called war down through the ages we find that changes were few and far between until the opening of the Industrial Revolution. Each change however was caused by the introduction of new physical factors on the battlefield. As industry developed, new weapons were invented. They required more and more manpower, machinery and materials for their fabrication. So an ever greater number of the civilian population was drawn into the orbit of war. This is the second aspect in which this war is different from any other war waged by America. This is a total war because it marshals the total technological resources of the nations concerned. The advance of science and technology had reached the point by 1939 where it was possible to launch and carry on a global war on a total basis with men, machines, materiel and propaganda. This was not possible even as recently as World War No. 1. Then, motorized equipment, auto-

matic high fire power mechanisms, radionic apparatus and the development of aviation were just sufficient to bring about a stalemate that resulted in a static type of trench warfare.

Three-In-One Spells Fascism

Fascism rose in Europe as a consolidation of all the minor rackets into a tri-partite conspiracy of church, party politics and business in order to crush the rising tide of philosophical and political radicalism seeking to obtain a more equitable division of the scarcity natural to Europe, and to maintain the status quo. Its rise was financed and abetted to a large extent by American oligarchs who looked upon fascism in Europe as insurance for their racket in America. Later, European fascism set out upon a larger career of world conquest for greater natural resources.

The program of European and Asiatic fascism is not a simple one of conquest, however. If it were, we could expect American corporate enterprise to declare war against it wholeheartedly. The real program of fascism is to freeze social change the world over, to stop the advance of science and technology and revert to the production of physical wealth by human toil and hand tools. Fascism wants to turn the clock back and establish by force an age of artificial scarcity.

This is the third aspect in which this war is different. Fascism is a reversion to a lower order of civilization and thus a denial of the greater destiny of America. This Continent has

left the age of scarcity behind and is ready to enter an Age of Abundance. This higher form of civilization is possible only in America, at this time.

America has progressed far into the Power Age. The advanced state of industrial development here has created a whole host of new and terrifying problems for the trinity of corporate enterprise, politics and ecclesiasticism which controls society here as well as in Europe and Asia. Despite 35 centuries of practice, this trinity the world over has been unable to organize the world for peace. The same behavior is displayed by the triple oligarchy in America. They have never solved a single one of the social problems of the modern age. Some of these are poverty in the midst of abundance, disemployment, economic insecurity, public health, racial animosities, crime, and a whole host of irritating secondary social problems. These can never be solved until the primary problem of production and distribution of physical wealth is solved. The only way our American oligarchs could solve these problems is by voluntarily giving up their rackets for the sake of the general welfare.

Every Man for Himself

Needless to say this will not be done, for none of us is willing to give up our right to give as little and get as much as possible for ourselves. This principle is the very warp and woof of our business and political structure. The United States is a young country. We have been highly successful in a business way because

God blessed America with easily accessible and plentiful natural resources. Six generations of trading has conditioned us to a razor-sharp appreciation of the cash register concept of social values. Individually we are smart, nice people. Collectively we are traitors to the greater destiny of America and thus to our own fate, for it is indissolubly bound up with America as a whole.

We have always lacked collective intelligence in America because our Price System of exchange places its social rewards upon individual financial success. This Price System and all of its philosophy, its operating rules and its incentives was handed down to us along with the dead folklore and traditions of yesterday's 7,000 years from the long Age of Scarcity. America today is like a chicken about to burst from its shell. But we don't seem to have the fortitude of the chicken breaking forth into a new world. We want to go back to yesterday because we're afraid of tomorrow. That is why our American oligarchs connived with foreign fascism. They too want to go back because they can see no answer to the American problem except the relinquishment of their inherited privilege to give as little and take as much as possible.

It is easy to see the tie up between foreign and domestic fascism. The same causes produced both. America is at war against the Axis Pact of Fascism. We all think we know who and where the enemies of America are. But do we? Technocracy states

that *'America Must Liquidate Its Pro-Fascists at Home Before It Can Defeat Its Fascist Enemies Abroad.'*

Three Causes For Total Conscription

From all the foregoing we are able to gather a birdseye view of the slow progression of social life and the parallel development of warfare over a long period of time. With the beginning of the modern age the tempo of change accelerated. This was not brought about by any intellectual efforts on the part of mankind. It was the result of events which occurred as effects of the impact of physical laws on the social structure.

One of the major changes effected by the Industrial Revolution was an alteration of the age-old methods of waging war. Armies became larger; navies went in for heavier ships which soon became ironclad. Rifles and long range artillery were introduced. The ironclad man of war became a modern battleship. Each war brought in new weapons requiring more and more materiel. The Service of Supplies to armed forces, which had been relatively simple, became complex. The telegraph and telephone became a part of the armed force communications. These were followed by radio. Balloons developed into the 'flying coffins' of World War No. 1 and these became the Flying Fortresses of the first total war in history.

Thus step by step we passed from a handicraft type of war to a technological and total type of war. All the men, machines, materiel and money of the nation are as legitimate a part of its striking and defensive

power as the soldier at the front. It is less than intelligent to conscript and organize only 25 percent of our strength and allow the other 75 percent to make a good thing for itself out of the agony and heroism of the boys on the firing line. The nature of total war cries out loud for an overall plan of operations. But we insist on planning for details only. We insist on conducting a total war with our cash register concept of social values. War is good for business, but private business in time of war is bad for America.

The three aspects in which this war is different constitute three basic reasons for Total Conscription of Men, Machines, Materiel, and Money, With National Service From All and Profits to None. Let's recapitulate these three differences.

- A. This is a total technological war.
- B. This is a war for survival.
- C. This is a war against fascism.

Technocracy is not predicating its program of Total Conscription upon something that may happen in the future. The three events mentioned above have already occurred. The effects flowing out of them are gathering momentum relentlessly. Ever since they occurred, nearly all Americans individually and collectively have been refusing to recognize their implications. Instead, most of us on the home front have been following the age-old Price System pattern of behavior to give as little and get as much as possible for ourselves.

Oh Yes! We bought bonds, 10 percent at least, but one eye was cocked on the interest rate. We worked over-

time on some corporation's padded payroll, but we always got our time and a half rate. We sold goods to the government for cost plus and hollered like hell about inspection standards and renegotiation. We toiled loyally in our Victory Gardens attempting to solve the technological problem of increasing food production by the hand tool methods of feudal agrarianism. We sing the Star Spangled Banner at movie shows and are always punctilious about removing our hat when the flag goes by. We even get a tight feeling around the chest and our eyes grow moist when we read about the exploits of American boys in the fog and cold of Attu or the green jungle hells of the Orient. But all this is not enough. It is merely the window dressing of patriotism, vicarious jingoism. For one who loves his country without reservation the place of greatest service to her on the home front is surely at the point of her greatest weakness. That point of greatest stress is America's lack of a scientific, overall pattern of operations to wage total war and win the peace for America.

Yesterday or Tomorrow

The three events mentioned above which compose the three aspects in which this war is different from any other war ever waged by America occurred *before* we got into the war. The nature of fascism was recognized and described by Technocracy almost ten years ago. When Germany invaded Poland in 1939 it became evident that this was to be a total, technological war. When the Japs

bombed Pearl Harbor we all knew that we had been forced into a war for survival. How many more signs do we have to have? The dislocations of our outdated Price System economy have been tremendous since we entered the war. Before it is finished the system will be out of kilter in a thousand places. Our refusal to install an overall, unified plan of operations is prolonging the war, using up ever greater amounts of non-replaceable natural resources; and needlessly killing thousands of young Americans. The prolongation of the war for the sake of preserving the private right of business to chisel off the national welfare may yet prove to be a Pyrrhic victory for so called 'free enterprise.'

America's devotion to government by pressure groups and the freedom of corporate enterprise to prey upon the general welfare is collective fixation on the dead past. Private enterprise is totally unnecessary to the general welfare in America.

Twenty-five years ago America turned the corner and left the Age of Scarcity behind. But the interference of party politics, clericalism and business has delayed our entry into a state of abundance. Now, we see private enterprise financed by public funds, betraying its historic role as the maintainer of scarcity by being forced to produce an abundance of goods and services for the prosecution of the war. The problems of a scarcity economy are how to effect an equitable division of the scarcity. This is an ethical and political problem and therefore can never be solved. All

ethical and political efforts to improve the lot of mankind are doomed to failure because such concepts are imponderable and hence unmeasurable. Politics and humanitarian sympathies are matters of opinion. And opinions are—well, what are they?

America Must Choose

America's problems are problems of abundance, not scarcity. Abundance cannot be bought, sold, exchanged or valued. Hence we are faced with a technical problem of distribution of abundance instead of an ethical division of scarcity. America has the men, machines, materiel and money to solve any of its technical problems. This is more apparent in a total war than in peace time. The only way to win this war in the shortest time, at the lowest cost in lives and resources is to forget about business, to abandon the cash register concept of values and to install a unified, overall pattern of operation based on the physical laws of science. 'The methods of yesterday's successes are the futilities of today and the defeats of tomorrow.'

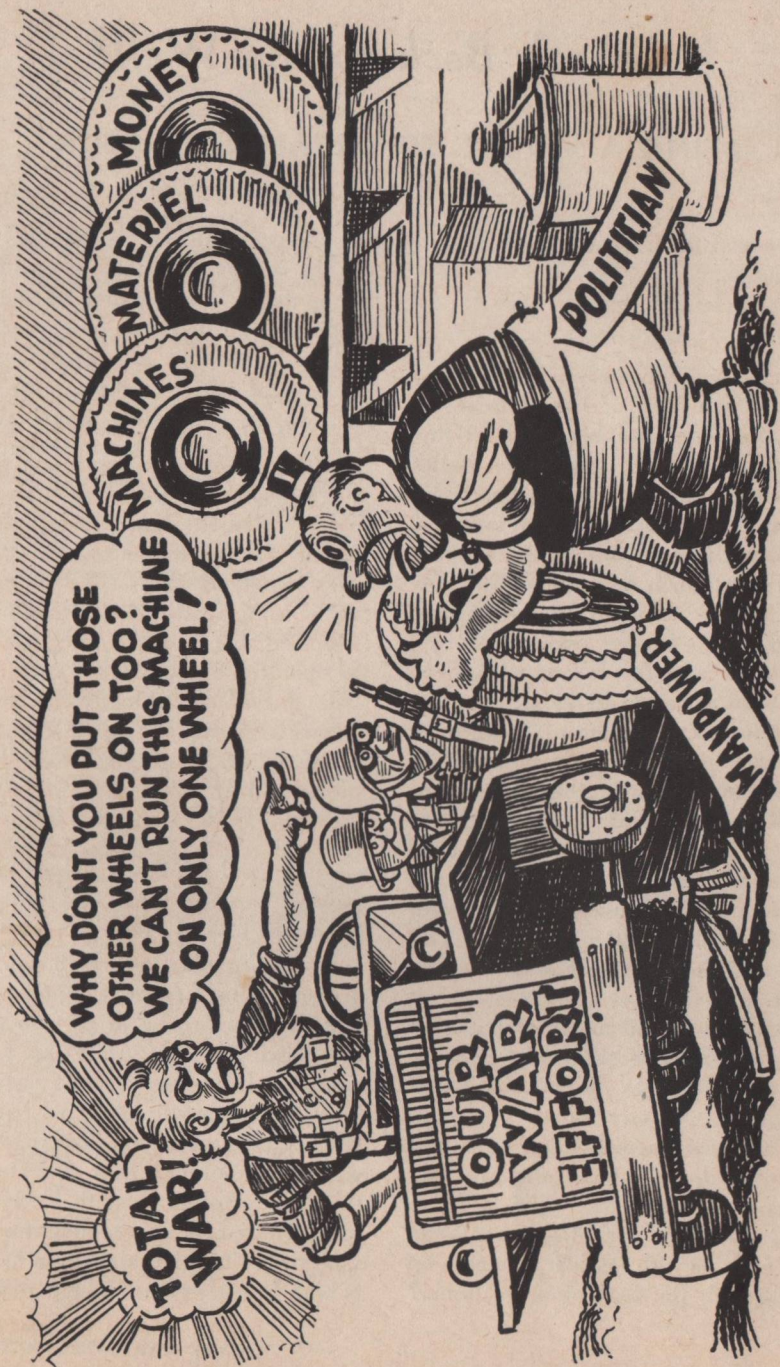
Problems of abundance are much easier to solve than problems of scarcity. This is because the former are real physical problems, subject to measurement and control by science

and technology. Total technological war is a problem of abundance, not scarcity. It belongs in the field of science and engineering. The blueprints for total war have been all worked out. They are ready for adoption. The maintenance of artificial scarcity in the face of external and internal fascism is Continental treason against America.

After this war is over we will perforce have to return to our vast backlog of unsolved internal, social problems. They will have been greatly increased by the social disruption of war. Are we infantile enough to dream that the trinity of corporate enterprise, party politics and ecclesiasticism, which was never able to solve America's problems before, will suddenly be able to solve them then? The adoption of a unified national pattern of operations now, based on science, will guarantee a total victory for America in this war against fascism. More, it will eradicate the spectre of post war problems. Are we in favor of yesterday or tomorrow? Technocracy calls upon all Americans to help install its *VICTORY PROGRAM OF TOTAL CONSCRIPTION OF MEN, MACHINES, MATERIEL AND MONEY, WITH NATIONAL SERVICE FROM ALL AND PROFITS TO NONE.*

'War is largely a contest . . . between the tools and toolmakers of the countries involved.'—Samuel Gompers, President, American Federation of Labor, World War I.

'In modern warfare the tide of battle flows to the side on which science, engineering and production are most strongly allied.'—Col. David Sarnoff, U. S. Signal Corps.



Is Labor's Back to the Wall?

BEING A LETTER TO ORGANIZED LABOR

Members of the Central Labor
Council,
Crystal Palace Building,
San Diego, California.

Dear Sirs and Brothers:

These are days of life or death—for nations and for men, and for the institutions which men have built. Gentlemen and leaders in American Labor, I ask your most vital concern with the life or death of our nation, our countrymen, and our democratic institutions—among them Organized Labor itself—for the reading time of this letter and the ensuing time required to act upon its issue.

There is no time and no necessity for either prelude or exposition. You are thoroughly aware that America is embroiled in Total War—a global fight to the death against fascist conquest. You are also aware that Total Victory must be achieved. It is the only possible road to that Total Victory that is the urgent issue of this letter.

You and I, and all other patriotic Americans, are working and fighting and are willing to die for that Total Victory—a Victory worth living in. But are we condemned to work and fight and die in internal disunity and internecine conflicts—and for an ironic triumph over fascism abroad that finds us with fascism moved in on us through the back door at home?

For fascism is inexorably moving in on us—in war exploitation, in profiteering on death, in anti-Labor legislation, tending toward Labor conscription, and in a soaring and astronomical public debt, which mortgages for generations, to controlling financial interests, our lives and our means of living, our future, and our government itself.

If we are condemned to this bogus 'Victory,' we are self-condemned. For open to all of us who love America, and Democracy—and a square deal—is the only possible road to Total Victory—a Victory over fascism abroad and at home, a Victory without profiteering on death, a Victory without debt, without inflation or collapse, without exploitation or class legislation, a Victory with equality of sacrifice, and a Victory gained in the shortest possible time and with the minimum loss of American lives.

In the organization which you gentlemen of the Central Council represent there are many of us who share the conviction that American Labor today confronts the greatest responsibility and opportunity in its history. We are convinced that American Organized Labor can lead America up the only possible road to Total Victory. Therefore, we are likewise convinced that to take this action at once is both Labor's pressing responsibility

to the Nation, and its unparalleled opportunity for patriotic service, and for the accomplishment of its own salvation.

Scores of labor organizations throughout the country have recognized both the magnitude and the exigency of this responsibility and this opportunity, and have gone on record as urging the immediate adoption of American Total Conscription — for a complete and coordinated national mobilization and operation, for the achievement of Total Victory.

But this partial and scattered action can hardly be enough for those of us who are fully cognizant of the virulent fascist menace in all its external and internal forms and who also cannot forget that every day and every hour our countrymen—our sons and our brothers—are dying on fields of battle soaked with American blood. We cannot forget—because we firmly believe that American Total Conscription at the outset of the war could have saved their lives.

Therefore we beseech you, Gentlemen, for God's sake—for America's sake—for Labor's sake—for the sake of our fighting men—and for the sake of our children and our children's children—we must demand Total Conscription in America now! In consideration of the cold, hard and bitter facts that we are up against, Gentlemen, accuse us of understatement rather than over-urgency.

We hold that nothing less than the swift emergency Total Conscription of Men, Machines, Materiel, and Money—with National Service from

All and Profits to None—can possibly defeat fascism abroad *and* at home, and defeat it without hopeless Debt and needless Death, and the deplorable Exploitation of Americans by Americans. We also hold that nothing less than such immediate Total Conscription can save for Organized Labor its hard-gained ground, avert the fascist conscription of Labor alone, and once and for all time prove conclusively that the patriotism of Organized Labor is the highest calibre in the country, and demonstrate as conclusively the vision and tactical wisdom of its leadership.

Therefore, on behalf of the many heretofore referred to in the labor organizations which you head and represent, the writer urges that you, Gentlemen, do all in your power to make this immediate installation of Total Conscription the prime objective of all Organized Labor throughout America.

For these are indeed days of Life or Death, and great are the issues of Life or Death—for Free Men and the institutions of Free Men, and their democratic premise of Equality—in both equal rights in peace and equal sacrifices in common peril. These days are making history, Gentlemen. May we of American Labor not lead in writing in the history of America the bright chapters of Total and Lasting Victory?

Sincerely and fraternally yours,

(Signed) EARL R. CORBALEY,

Member Salesmen's Unit,
Butcher Workmen,
Local 229.

War! It's Wonderful!

With Apologies to Father Divine

by Charles J. Loignon

Devil Take the Hindmost

Oh, yes, war is hell, but who cares. The morons are 'coining the dough,' so they wouldn't mind the fighting keeping up for a while longer till each moron 'catches up' a little. Let the hoarder 'salt it down,' and if the war lasts a couple of years he will be on Easy Street. Who cares about a little corruption and graft if one is in on the 'takings'? Should anyone 'in the know' remain outside in the 'cold,' a good job or easy money soon produces silence.

A politician's dream of 'all out' effort is a defense soup seasoned with the above ingredients. If Americans can swallow this pretext at defense, then they can be made to believe that we can lick the axis overnight with beans and a sling shot.

When a politician says, 'we have to tighten our belts,' he means *our* belts, not his. We are asked to conserve rubber apparently for defense interests. A tire which brought the huge sum of 20 cents when sold to certain interests under government compulsion now costs \$6 if one is privileged to get it. We collected keys to accumulate a metal stock pile while certain defense plants dumped it in the river by the bucketfull. Newspapers were asked to conserve paper while covering their pages with adver-

tisements. Local airports are taking passengers up for rides, and six milk trucks deliver milk in one block the same day, while we take a cut in our gas coupons—to aid defense. Nice business, when the government, supposedly the representative of the people, before election, compels us to enrich certain monopolistic interests.

War production suffered a drop in July while headlines brought the sad news that equipment had to be taken from our training forces here to supply our forces on foreign fronts. General Douglas MacArthur reports in a recent bulletin from the southwest Pacific that 'our resources are still very limited.'

Crying or grieving does not help our cause. Let's heed the warning of a hero from Gaudalcanal, Corp. Edward F. Long of Chicago, who was in Milwaukee August 10 to tell a radio audience:

Every time one of you fellows lays off a day or slacks up on war production, someone out there doesn't come back. Someday you may be out there and get an awful sick feeling when the supplies you need aren't there.

Most Americans—including the fascists—are sure America will win this war. Our experience in fighting should help us to win easily. Besides family squabbles and political battles

the paupers struggle with the wolf at their door; the drunkard fights the alcohol; the job seeker fights for easy government jobs; business fights for luscious profits; agriculture and industry are fighting for a federal 'hand out'; and government bureaus fight for a position on the top rung of the dictatorial ladder.

The idea of 'planning' has the public confused in believing that real planning is done in the interests of the nation. The man in the street is sure we are going to win the war, but he is not so sure of the aftermath. America is literally covered with a rash of plans. Business plans to continue private business; government plans to extend the principles of the PWA, WPA, CCC, and AAA on a grander scale. Everyone plans—how to make more money with less effort.

There are now listed in the United States 137 organizations of postwar planning agencies besides programs sponsored by libraries, university courses, local institutes, publishers, agencies concerned with other nations, and private business plans. Technocracy is not included in these.

Technocracy is not a pre-war, mid-war, or post-war plan. It is an all time plan and never represented less than the interests of all Americans.

It is worth while to quote a couple of planners. Paul C. Hoffman, president of the Studebaker Corporation and chairman of the Committee for Economic Development, is quoted in a New York *World Telegram* editorial:

I have no confidence whatever in the ability of any agency—

public or private—to make over-all plans for our economic system or for our business enterprise. But I do have the highest confidence in the ability of individual business men to plan for the future of their own businesses. That's why I say individual enterprisers must do this planning for themselves—I mean all three million of them. Only a small part of the necessary job can be done by the approximately 500 large employers. The real shock troops of this campaign of bold and intelligent planning by individual enterprise are the smaller businesses and the men in business as individuals who make up three million individual enterprisers in America.

Please note who is going to be the goat of big business. The millions of little minnows trying to grow big will be the shock troops. The growth of the minnows is encouraged to develop into sufficient food for the whales. See where the sucker comes in?

May 6 issue of *Engineering News-Record*, published by McGraw Hill Publishing Company, carries this 'planning' editorial:

Construction equipment taken over by the War Department on many large contracts during the past year and a half is being prepared to be sent abroad or already has gone abroad in anticipation of the construction that must be done behind invasion forces. More equipment is being taken by construction battalions

of the Navy and general service regiments of the Army. Thus is being repeated on a larger scale what occurred in the last war. But then the amount of serviceable equipment that was sent to our armies in France was brought back and turned over to the state highway departments. That mistake should not be repeated following this war. Equipment sent overseas should be disposed of abroad, even if it has to be given away. In the first place, clearing the storage yards in this country of most of the surplus construction equipment will make it possible for our manufacturers to start quickly on the production of new equipment of improved design;

and that will, of course, aid employment. In the second place, disposal of American equipment in remote corners of the world will familiarize constructors in those countries with our equipment; thus will be built up a demand that should provide export markets at about the time that our equipment manufacturers have passed the peak of replacement demand in this country. There should be no round trip tickets for construction machines.

In other words business enterprise proposes to give America away at cut rate prices in order to maintain the Price System a little while longer. 'After us the debacle.'

WAR! IT'S WONDERFUL!

If You Sow the Wind—.

'Scrap metal we sent Japan is coming back to us now in shrapnel wounds. In our surgery we often find shrapnel in which we can identify pieces of American-made razor blades and pop-bottle caps.'

Aug. 24, 1943 . . . Lieut. Col.
W. J. Carrington, Chief of Surgical Service at new 6 million dollar army hospital at Clinton, Ia.

' . . . if America becomes involved in a war with Japan, we can console ourselves that we at least have given her something to remember us by—American materials will come back to us done up in Japanese wrappers that won't be so pleasant; in fact, they won't be bouquets.'

—Howard Scott, Director-in-Chief,
Technocracy Inc., October
1935.

'—It is appalling to come back from the fighting areas and find arguments going on which indicate that profits and union rules come first, and output second. When you are around

combat forces, it is hard to imagine such a state of mind, and revolting.'

Excerpt from Raymond Clapper's column in *Chicago Daily Times*, September 23, 1943.

Where is America's Offensive Power?

By Education Division 8741-1

Range	12,000 miles
Ceiling:	35-40,000 feet
Wingspread:	330 feet
Speed: over	300 m. p. h.
Bomb Load	50 tons

The offensive power of America resides in the long-range Continental bomber that will meet the foregoing specifications. Have we such bombers today? No. We are fighting today's war with yesterday's weapons. We must win the battles of tomorrow with tomorrow's weapons. American technology can produce those weapons — fleets of Flying Wings that will carry destruction to the homelands of the enemy. With the Flying Wing Bomber America will achieve the offensive that will make it supreme.

Flying Wing Bomber Could Destroy Berlin, Tokio and Rome!

Tokio could be destroyed in a few hours—the fewer the hours the greater the destruction! This could be done from American bases. From American bases Berlin and Rome could be destroyed. From American bases the fleets and factories of our enemies could be destroyed.

The Flying Wing, super-bomber, as designed and proposed by Technocracy, could drop 275,000 tons of bombs in one single raid of 5,500 planes! This would be total war.

War is hell according to General Sherman. But he only told half the story. If America is to win this war in the shortest time and at the lowest cost it must make the fullest use of its unparalleled technology.

For the first time in history technology has made it possible to be utterly ruthless.

For years engineers have been working on designs which would break away from the conventional type of plane, and today planes of the Flying Wing type have been flown successfully. Modern technology now makes it possible to construct these ships to enormous size. Anticipating these trends, Technocracy has designed the Flying Wing bomber and advocates its immediate construction in quantity.

The Flying Wing has no fuselage; all machinery and facilities are within the aerodynamically designed wing itself. The bomber will have a wingspread of 330 feet, it will carry 50 tons of bombs for 6,000 miles and return without refueling. It will be powered by huge multi-motors with eight pusher type propellers—two on each shaft. The bomber will have a ceiling of 35,000 to 40,000 feet and a speed of over 300 miles per hour.

The Flying Wing is designed for technological mass production utilizing plastics to a great extent. No rivets or hand methods would enter into its construction. Planes of this size and type could not be produced by methods used in the aviation industry today, but once the production lines were built the planes would roll out at unprecedented speed.

This plane is primarily a bomber but it can be used for the transport of troops and war equipment and as a bulk freighter of the skies. It would solve the submarine problem and the difficulties of wartime ocean transport. With its bomb racks and armament removed, its useful load would greatly exceed 50 tons of freight. With this load it would cross the Atlantic in 8 to 10 hours.

As a bomber the Flying Wing would require no protecting escort of fighter planes. America's Flying Fortress has demonstrated the effectiveness of a heavily armed bomber in protecting itself, but the Flying Wing would have many times the fire-power of the Fortress. Its great size and weight would enable it to carry guns of a caliber now impractical for aircraft.

Technocracy proposes a separate Air Command. In addition to the Flying Wings the Airforce would consist of fighters and long-range, twin-motor, fighter-interceptors with heavy fire-power. Their range would be 2,500 miles. The Army, Navy, and Fortifications would have their own specialized planes.

Technocracy proposes construction of sufficient Flying Wings to provide a fleet for each of the 22 main bases surrounding this Continent. About 24,000 Flying Wings would be required. They would operate in squads of 11; 10 squads would form a squadron; 10 squadrons would form a fleet. Thus each fleet would consist of 1,100 bombers. A single fleet would carry a bomb load of 55,000 tons or 110,000 half-ton bombs. Five fleets from one coast, leaving the others in reserve, would consist of 5,500 planes carrying 275,000 tons of bombs. The Wings of the Continent would only need to pass over their objective once.

The bombing action would be in pattern formation covering the entire target area.

Early in 1942 the R.A.F. bombed Cologne with 1,000 bombers. They dropped a total of 3,000 tons of bombs, but this was not enough. Only a certain area within Cologne was devastated. The R.A.F. must go back again and again and again to this one city to ensure its destruction as a war production center. In a single raid the Flying Wings could bomb Cologne from America and drop over 90 times the tonnage left by the R.A.F. Cologne would no longer exist. A much larger city, Berlin, or Tokio, or Rome could be wiped out in one single attack. How long could the fascist world continue such a fight against America?

Can America build these bombers? The answer is an unequivocal yes, as far as our technological capacity and

engineering skill is concerned. No other country has the capacity and skill to produce them in numbers. America has victory and supremacy within its grasp. Will these bombers be built—in time? Such bombers must be built sooner or later. It will require a terrific effort, an enormous construction program, keen vision, and bold action, but if America permits apathy, vested interests, and internal fascist sabotage to stand in the way, the Flying Wings may come too late.

If these bombers were built the war would be won more quickly with less cost. The airpower of tomorrow will make the airpower of today as anti-

quoted as a model T on our highways now. The final victory will come to the country that first produces fleets of bombers having 6,000 miles or more range and carrying 25 to 50 tons of bombs each. That day is almost here. It may not be next week or next month but it will be done almost certainly within the next two years. America must lead not follow.

Technocracy presents these specifications for the security of America. For the first time in history technology has given us the opportunity to be ruthless. If alien powers threaten our existence shall we not make use of our technology?

Small Operations, Small Results

What would be the result of dropping 9,000 tons of bombs, in a total of 8 raids, on a city the size of Detroit, Michigan?

It has happened to Hamburg, Germany. The 'results' were described recently to the United Press by an eyewitness, as follows:

Money is not functioning in Hamburg . . . A path has been made through old traffic arteries where the buses now travel; passengers jump on the few remaining trains and buses wherever they wish, and jump off again without paying. Every one eats in public field kitchens scattered through the city, and no one need pay there either. . . . No one seems to think of money.

Press dispatches also state that 8,000 persons were killed by the

bombs, 18,600 wounded and 3,500 missing.

Hamburg, like any other European city, is dependent only to a limited extent upon technological equipment for its daily living. Also, because business in the rest of Germany was and is still going on as usual, that is, according to the rules of the Price System, money was spent by the Nazi government to buy food to bring into the city, etc.

These raids are not what they could be. Most of the city's population and structures were still intact after the raids; only 14 percent of the city was destroyed and less than 2 percent of the population were casualties. These 9,000 tons of bombs could have been delivered by a small fleet of 180 Flying Wing Bombers, each one carrying 50 tons.

Only One Way to Skin a Cat—Nowadays

Reprinted From Coefficient

A Bulletin of Section 1, R. D. 8342, Detroit

Ragged Independence Passes

The technological progression in producing an increase in the conversion of extraneous energy over human energy in the ratio of about 150,000 to 1, and in accomplishing the shift from handicraft to process, and from batch to line production, has created a new way of life in America; a high-speed, dangerous existence that calls for a degree of voluntary efficiency not present or necessary in agrarian, hand-tool societies.

In the past, pursuits of primitive life, hunting, herding, hoeing corn, drawing water, hewing wood and defending oneself in close personal combat, permitted a wide latitude of personal choice in behavior modes. 'There are many ways to skin a cat.'

Loose and varied patterns of individualistic behavior were possible without serious consequences to the social group. Lines marking the division of labor were never sharp and the individual might be sufficiently skilled in all of these pursuits to maintain an almost completely independent existence. Very little organization, planned direction, or cooperation was needed.

Modern society lives by means of a vast, complicated, highly integrated,

highly tenuous mechanism in which man, the individual, has become a minor circumstance. Many men take part in designing, installing, operating and maintaining productive equipment, but the individual's role is a minor one. Minor but IMPORTANT. Important only in his relation to the over-all design of operation. Important only because his function is important. No human being can expect more than this.

The new way of life and the new criterion of social prestige, based on function, calls for a high degree of SELF DISCIPLINE, here defined as an individual's ability to govern his behavior in respect to the requirements of his job. The requirements are now sharply defined, permitting little latitude of choice in behavior. A very narrow divergence on the part of the individual from the technical operating specifications may impair the efficiency of the operation, may ruin the equipment, thereby stalling a long production line, may even take the life of the operative.

Self discipline induced by physical factors is far more rigid than any discipline forced by bulldozing bosses or economic fear. When you read this sign on the fence or building: '10,000 VOLTS—KEEP OUT,' you keep out!

Rugged Interdependence Enters

The foundation of self discipline is knowledge, accurate information about the equipment you are operating. You damn better well learn all the facts about an electric power station before you begin pulling switches. If you expect to live safely in your environment you better learn the physical factors of your environment. Acquiring such information is what we mean by Education. Self discipline must eventually become the objective of all educational institutions, and first-hand observance of natural phenomena and the application of science to modern production must comprise the major part of future educational curricula. *We must show American youth what this Continent is made of and how the American mechanism is put together.* We must help our boys and girls to find their places in this mechanism and show them that their security depends upon their ability to govern their behavior in respect to the operating characteristics of the mechanism.

The old pride in the individual's handicraft accomplishment passes with the advent of process production. A new pride will take its place.

'... the commandments of science: Believe not your eyes, nor your ears, nor your senses. Believe not what seems to be or appears to be. Believe not what other men have spoken—until you have *proven it to yourself*. Cast aside these things and supplant

Pride that will come from the individual's awareness of his importance in the functioning of a powerful, coordinated, planned dynamic design. He will be proud to be on the All-American team. He will be cooperating with about 195 million others on this Continent and raising his functional Coefficient through self discipline.

Technocracy Inc., is a voluntary, self disciplined organization. The Section is the local distribution center for accurate information on America's technological environment. It is the training school for the self discipline necessary to the smooth operation of the American Mechanism upon which our safety and security depends. In the Section we learn the structure of the big, over-all design which must eventually be installed if we are to survive. We also learn that the part the individual plays is a minor one but none-the-less important. The big job is a composite of many little jobs that must be done efficiently if the design is to be effective and the complete mechanism kept running in high.

In Technocracy one attains recognition and approbation, not by being somebody, but by *doing* something; doing some of the multitude of little jobs and doing them well.

them with precise and proven thought. Then you will have science. Be not swayed from living to those words, for they are the words of science—and *science is the salvation of the world.*'—Galileo.

America is One Continent

By the Peripatetic Technocrat

TORONTO, ONT., Sept. 3—(Special) — CNPR. — Canada's war-created plant and industrial capacity is 'so extensive, new and challenging in its potentialities, that the basis has been laid for a new industrial revolution,' J. L. Cohen, member of the National War Labor Board, told the Rotary club here Friday.

'It is idle to assume that Canada either can support herself, or even function, if she demobilizes this vast industrial army, or if she attempts to return them to casual activity of former unemployment,' declared Mr. Cohen.

'This complete transformation of Canada's economy and its relation to an international industrial world, is here to stay and will continue and even develop after the war.'

Mr. Cohen said he 'disagreed' with the published statement of W. C. Coulter, of the Canadian Manufacturers' Association that the post-war industrial employment of 1,500,000 Canadians (the number now employed plus those returning from armed forces to factories) 'seems impossible.'

Continental Again

'President Roosevelt addressing the Canadian Parliament at Ottawa seems to be as natural as the Grand Trunk operating into Chicago or the San Diego and Arizona Eastern running trains over tracks that cross and re-

cross our boundary line with Mexico as if it just weren't there.

'Yet it is less than a generation when the middle of an international bridge was considered the proper place for an interview between heads of North American governments, if any were to be had at all.

'... now we are pretty far along with a new species of *continental patriotism* and *solidarity stretching from Panama to the Pole*.

'Prior to 1783 the continental concept of American position was the prevailing one. It was a 'Continental Congress' that adopted the Declaration of Independence. *Now we are going continental again in a big way*—not governmentally but even more fundamentally.'

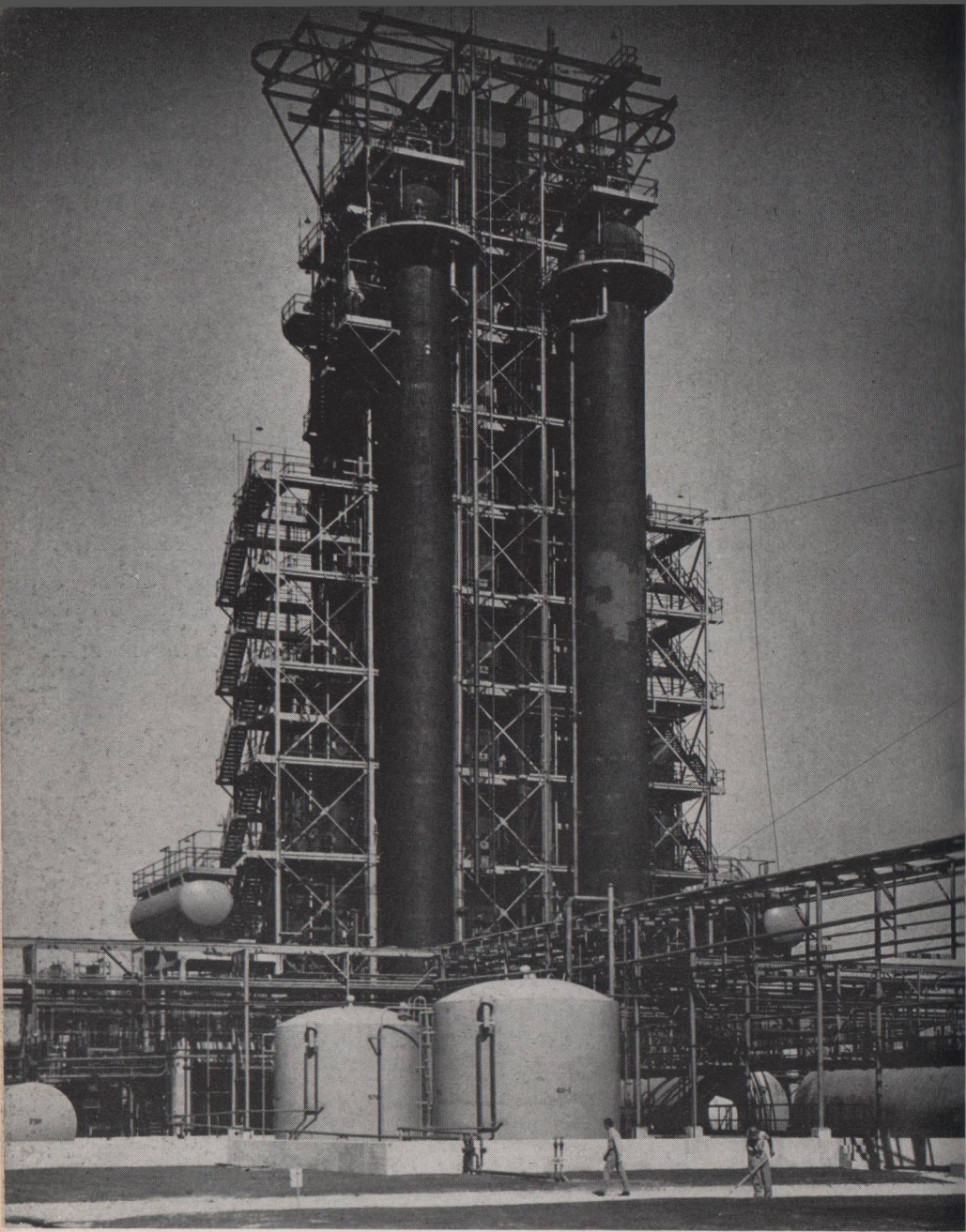
From an editorial in the *Chicago Daily News*, August 27, 1943.
(Italics ours.)

Some men look at constitutions with sanctimonious reverence and deem them like the Ark of the Covenant, too sacred to be touched. They ascribe to the men of the preceding age a wisdom more than human, and suppose what they did to be beyond amendment. As new discoveries are made, new truths disclosed, and manners and opinions change with the change of circumstances, institutions must advance also, and keep pace with the times.—Thomas Jefferson.



Photo—Courtesy Air Transport Association

How far is an hour, in distance? As far as available transportation technology permits. How far is a scientific idea, in progression? As far as collective social consciousness recognizes the trend of events brought on by the impact of physical laws. This 200 m.p.h. plane typifies the Power Age which demands scientific operation. The horse and buggy typifies all of yesterday's 7000 years.



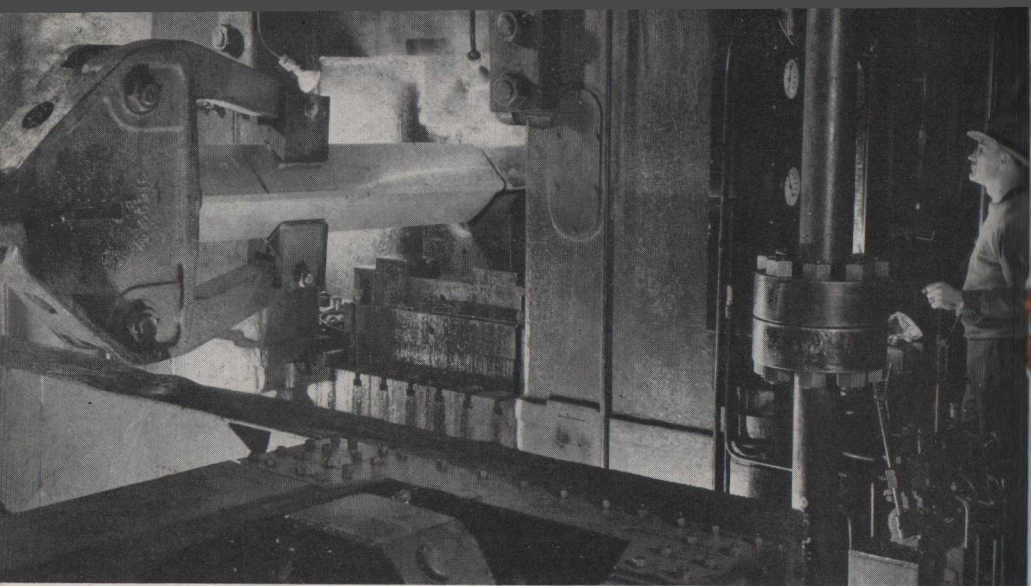
Photo—Courtesy Monsanto Chemical Co.

Reaching into the sky 20 stories above ground is this distillation tower of a Styrene plant at Texas City, Texas. Styrene is one of the raw materials used in Buna-S synthetic rubber. The plant went into production seven days less than a year from the time construction was started. Taxpayers' money financed it. Who'll get it after the war at a nice discount? Who cares? The plant's the thing.



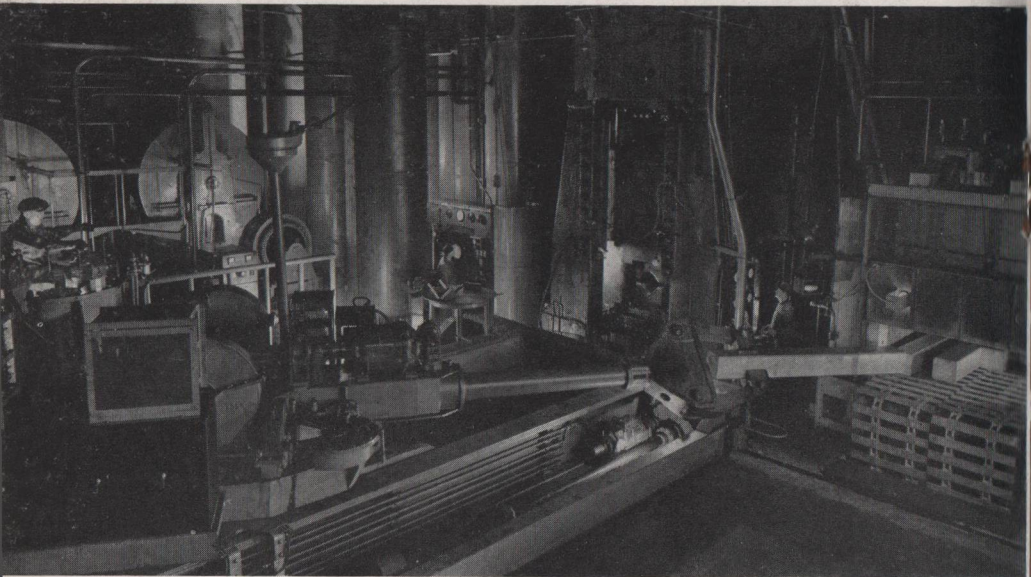
U.S.D.A. Photo

Preliminary patterns of science on the ground and in the air. It is said that air power will win the war; and also that food will win it. Every little bit helps. Contour farming holds soil, water, seed and fertilizer on the land, helps to increase yield. It is a step toward agro-technology. The trend in aviation is toward the aerodynamically correct Flying Wing. We'll get there after while.



Photo—Courtesy Chevrolet Motor Co.

Hydraulic forging of 1500 lb. aluminum ingots increases their tensile strength from 40,000 to 55,000 lbs. per square inch. Ingots move through an automatic furnace at 720° F. From 12 inches thick the ingot is hammered down to 9 inches by 6,000,000 lbs. of pressure, 3,000 tons per stroke. The billets are reheated to 820° F., cut into slices, then processed by more forging into crankcase sections, etc.



Photo—Courtesy Chevrolet Motor Co.

A carrier on rails 20 feet apart extends a giant claw to transfer ingots from furnace to press. Carrier, arm and claw are controlled by one operator. The entire installation is completely regulated and coordinated by an automatic control system. Lights, horns and bells issue signals in case of trouble. Only two men are in evidence. Here is a prime example of technology and extraneous energy.



Techphoto by Beverlelgh

Let's leave the field of industry and look at some of the activities of Technocracy Sections in the Great Lakes Area. Here is an outside view of the Chicago Section Headquarters. It is also the publishing office of this magazine. Its location is four short blocks from the heart of Chicago's loop. Thousands of passers-by examine the window display every day. The lady is not interested in cameras.



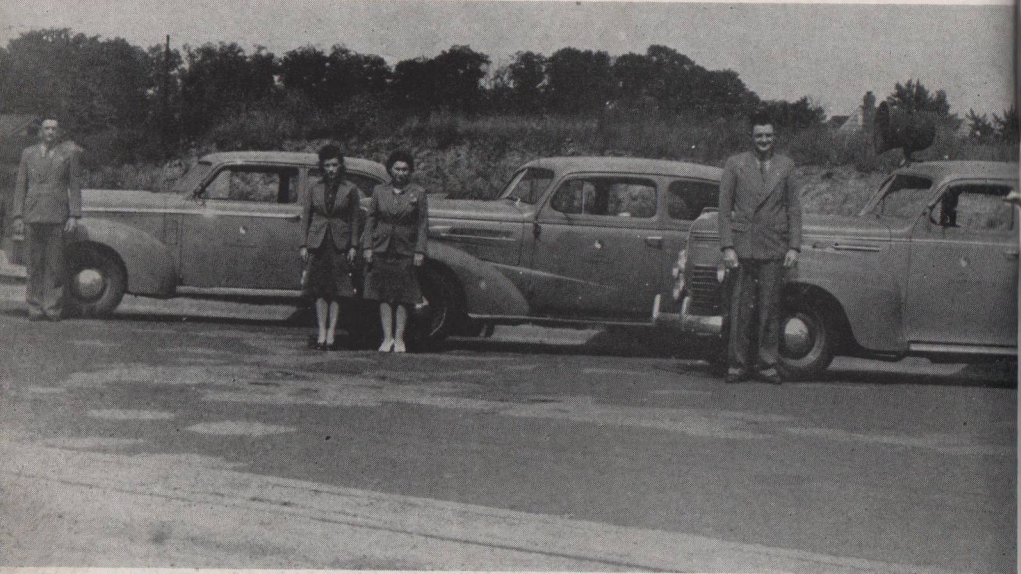
Techphoto by Beverlelgh

A Study Class in 8741-1, Chicago. The Study Course is in no way a course in propaganda. It is an educational study based on factual knowledge. The reference books used were not written by Technocrats. The studies present in a panoramic view the basic relations of all essential elements of the whole field of social problems. Such a course is given nowhere outside Technocracy. It is for members only.



Techphoto 8342-1

Another phase of Technocracy's activity is its Mobile Sound Units, the largest fleet of Sound Cars in the world. These units have been in heavy demand since Pearl Harbor by Civilian Defense, Red Cross, American Legion, Police authorities and civic organizations. Here is one provided by the Detroit Section assisting at an O.C.D. gas mask drill. Cleveland's large Sound Fleet is also kept busy.



Techphoto R. D. 5641

Leaving the larger industrial centers on Lake Erie, let's wander down into the land of the 'Hoosier Poet,' and R. D. 8641 Technocracy Inc. at South Bend, Indiana. Three gray cars, one equipped with sound, and four determined Technocrats. It is a hand hard to beat. It takes all aces to prevail against human inertia, but Technocracy has got what it takes, from coast to coast and border to border.



Techphoto—8743-1

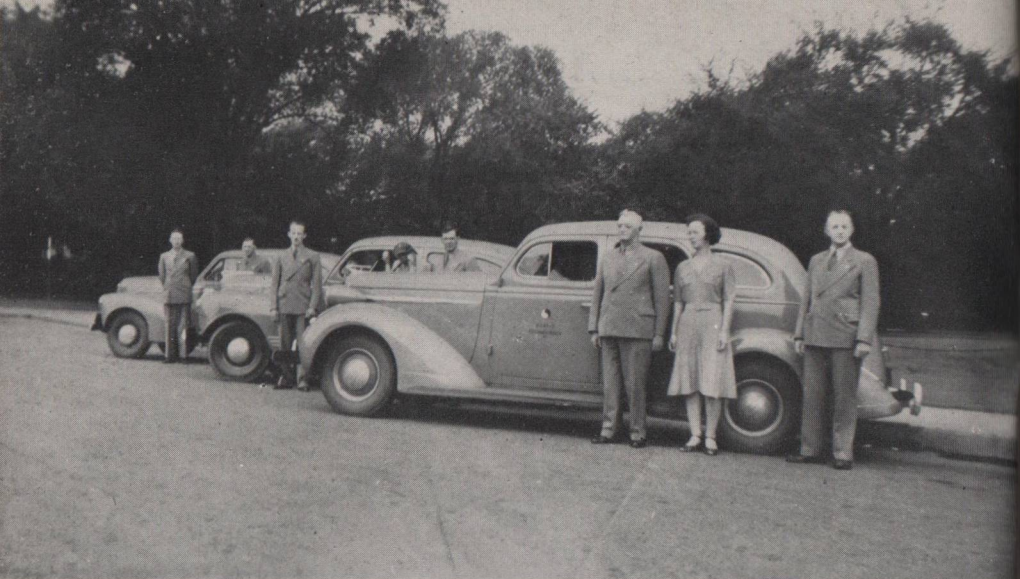
Wisconsin boasts that it is 'America's Dairyland.' It could also boast of many large industries, and what is equally important many solidly established Sections of Technocracy. Here is the Milwaukee Section, with its own exhibit at the Wisconsin State Fair. 'Some Punkins.' Technocracy is rooted deep in the social structure of America. It is an indigenous movement representing all Americans.



Akron, Ohio. Jan. 17, 1943

Techphoto—8141-3

Here's another type of activity Technocracy engages in, called symbolization. Notice the large sign. Technocracy, unknown until 10 years ago, has now become a household word in America. It may not be long until the trend of events will make it a household necessity also. Its research material will always be available for use when our social muddle becomes too deep to muddle through any more.



Techphoto—8741-1

INVESTIGATE TECHNOCRACY

Back in the Windy City, we see a part of the Chicago Section of Technocracy lined up before the Museum of Science and Industry in Jackson Park. They tour the museum once every summer and then hold a picnic in the park. Technocrats are just the same as all other Americans, only more so. You'll find them in all walks of life.

Technocracy is something new under the Sun. It never happened before. The history of all social movements of the past is a pathetic tale of frustration and unrealized dreams. Neither political, moral, ethical or esthetic principles can effect an equitable division of a natural scarcity. All you can do with it is to buy it low and sell it high.

Man does not live in an imponderable world of abstract ideas. He only DREAMS there. His living is done in a world controlled by physical laws. That's why you can't amend the physical world by dreaming up solutions. The elements of any problem contain its solution. Since we operate in a physical world, the elements of our National problems are physical. They can be counted, weighed and measured; seen, felt, tasted and heard.

Technocracy is the Social Mechanics of the Power Age. It couldn't happen anywhere else, because the rest of the world is still in the first or second stage of the industrial revolution. America's primary problem in peace and war is to organize and operate for the production and distribution of abundance.

Technocracy has no social program for America until the enemies of America are defeated. There is only one blueprint for Total Victory against Fascism at home and abroad. Investigate Total Conscription!

The Real Lost Generation

by Anne Laurie

Keep Healthy and Win the War

HOW easy it is to keep healthy and how many Americans were in a state of health before the war began? Perhaps we might start with cities and school children. The health authorities recommend heavy milk consumption for the average city family. On November 14, 1942, after studying 673 average income families, the University of Wisconsin researchers found that low-income families, those earning less than \$1,600 a year, were short of fresh milk rations. The average consumption was found to be 11 quarts per month. Low-income families used only 9½ quarts, while families with incomes over \$3,000 used 12 quarts. The researchers recommended consumption of 15 quarts for adults per month and 30 quarts for children per month, or approximately one quart per day for each child.

In Chicago for sometime young children in school have been purchasing 'penny milk,' that is, a bottle of milk each day for one penny. In all too many cases that was the only milk most of these children received. In addition, an 18 cent lunch has been provided in Chicago high schools, or a 6 cent lunch in grade schools, made possible by federal funds. Federal money for this penny milk and hot lunch program was left out of the

An apple a day keeps the doctor away—so they say. Maybe there is something to it. The record shows that most of the generation now rising 50 (many of whom peddled apples on street corners following the 'War to End All Wars'), are more sound in body and limb than the generation raised in the Great Depression. Perhaps it's because the old boys ate their own merchandise; or maybe the younger generation was robbed of something by the Price System's inability to solve its internal social problems!

Agriculture Department appropriation bill for 1944 when the House passed the measure in April 1943. The decision to discontinue federal purchases of food for school lunches was reached because a number of the items were rationed and a continuance of the system would mean unfair competition with food handlers according to the rules of private enterprise.

On February 1, 1943, community school lunch programs receiving free food from the Federal Department of Agriculture were serving approximately 5,250,000 children in the

United States, of which 730,000 were located in five Great Lakes States, Illinois, Indiana, Michigan, Ohio and Wisconsin.

After much effort on the part of some public spirited citizens the penny milk and the school lunches are to be continued, on a reduced scale and to a smaller number of children. We Americans are so conditioned to our rugged individualism, that, paradoxically, we have to depend upon a semi-charitable institution to distribute milk to our children!

With Total Conscription of Men, Machines, Materiel and Money at this time all families would receive adequate food, measured so that malnutrition will be impossible. With government control of all flow lines of production, including food, and government distribution in terminal commodity centers, we could provide *all* children *all* over the United States with an adequate amount of food to keep them healthy. We have the cows; we have the milk; but our distribution channels are choked.

Farm and City Health

What about health prior to the war? Were we, as a nation, healthy then? In 1941 the Farm Security Administration conducted a survey into the health of low income farm families. The survey covered 2,480 Farm Security Administration borrowers and their families in 21 typical counties in 17 States, a total of 11,497 men, women and children. Only four in every 100 of these farm people were found to be in top physical condition. Ninety-six percent had one or

more significant physical defects. The most frequent defect was bad teeth; nearly seven out of 10 persons over 5 years of age had decayed permanent teeth; the proportion among white persons between the ages of 15 and 20 was 85 percent. Of the 9,776 persons in white families examined, 55.3 percent had defective tonsils. Among wives, 41.6 percent had second or third degree injuries resulting from childbearing. More than 40 percent of the wives and 35 percent of the husbands had at least moderately defective vision in both eyes. Thirteen percent had abnormal blood pressure and 79 in every 1,000 persons had impaired hearing in one ear; 29 had middle ear diseases. Clinical diagnosis revealed that one child in every 12, under 15 years of age, suffered from malnutrition; one in 17 had rickets. White husbands and wives showed 1.15 percent positive reaction to blood tests for syphilis; for negroes the percentage was 12.75 percent.

In the city, a survey completed by the Nutrition and Pediatric staff of the Elizabeth McCormick Memorial Fund of 7,200 boys and girls from 3,900 Chicago families, showed that not more than six of every 100 children examined could be described as robust and in rosy health.

Even in the 'better' neighborhoods, 40 percent were found to be in relatively poor physical condition. The survey, Dr. Martha C. Hardy, Chairman of the Research Department, said, gave conclusive evidence of the relationship between the economic

status of the family and the general health of the child. Fully one-half of the children among families accepting relief and charity had physical defects and were in need of a physician's care. Even among families of average income levels, 25 percent of the children were found to be in poor condition. Improvement was noticeable as families rose in economic status. Fifty-eight percent of the children examined were found to be in need of dental care. Thirty-four percent, for the main part children under 5 years of age, had not been immunized against diphtheria, while 55 percent of those under 5, and 21 percent of the total number, had not been vaccinated against smallpox.

Diet deficiencies were also studied and it was found that only 26 percent of the 7,200 children examined were meeting the minimum standard in their diets.

On May 26, 1943, Mayor Kelly of Chicago declared that moneyless persons suffering from tuberculosis will have to go without treatment if the County Hospital Tuberculosis Section is closed. There is no money to expand the services at the Municipal Tuberculosis Sanitarium, because to obtain it more taxes would have to be levied.

We know how to take care of teeth decays, tonsils, ears, rickets, syphilis, diphtheria, smallpox, tuberculosis. Yes, we have all this knowledge. But the great city of Chicago cannot dig up \$100,000.00 to keep a TB sanitarium open.

Total Conscription of Men, Machines, Materiel and Money would

mobilize all of our medical, dental, pharmaceutical, dietary and clinical facilities for war-time mass service to the populace, both city and farm, on the same basis that the Armed Forces receive this care—without price!

Chickens Come Home to Roost

Now what about the youth conscripted into the Armed Forces in ever greater numbers since Pearl Harbor! There are 22,000,000 American men between the ages of 18 and 38. The Surgeon General of the U. S. Army and the medical examiners of the Selective Service System have stated that of this number approximately 9,000,000 are today physically unfit to serve in the Armed Forces. The U. S. Public Health Service indicated in March 1943, that nine-tenths of young Americans in the 16 to 24 age group from low-income families are in need of medical and dental treatment and that one of the reasons we have a manpower problem today is the lack in the past of plain, ordinary purchasing power.

Tens of thousands of men in the older age brackets face military service because they are more sound in body than younger men. Among the latter already rejected for military service there is exhibited a variety of about 480 diseases and physical defects. In 1917 and 1918 an average of 31 percent of American men were rejected for military service because of physical unfitness. In 1942 and 1943 an average of 42 percent have been found physically unfit.

Health conditions among registrants for military service were so

bad that the Army and Navy have been forced to lower their physical standards in order to get enough men to meet monthly induction quotas. Defective teeth were dropped from health considerations in order to insure sufficient quotas. The Army now takes men whether they have one tooth or a full set. Even before Pearl Harbor, on October 10, 1941, General Hershey made public the figures showing that 2,000,000 draft registrants were physically deficient.

An attempt was made to show that this condition was due to 'soft living' of a quarter of a century since the United States fought in World War I. To the statement that 'soft living' was responsible, R. Clyde White, Professor of Social Service Administration, University of Chicago, took great exception, pointing out that rejections because of bad teeth were most common and diseases of the musculoskeletal system and tuberculosis most important, and that these diseases were intimately related to deficiencies in diet.

Dr. White also pointed out that the boys taken into the Armed Forces in 1942 and who ranged in age from 19 to 24 were, in 1931, about 8 to 13 years of age. Between 1931 and 1935, stated Dr. White, we suffered the greatest economic depression in history. Many of those boys lived months or years on a diet which was both insufficient in quantity and inadequate in protein, fats and vitamins.

Might we point out that the years mentioned were the same years in which we killed little pigs, destroyed

oranges by spraying, dumped bananas into the ocean and generally paid farmers to produce less, so that a scarcity could be maintained? Now, at a time of grave national danger and crisis, we are paying the penalty as a nation.

Public Health or Private Enterprise

There are other dangers to health standards, not only of the children but of all of us; that is, an inadequate distribution of doctors amongst the civilian population. Even with the best of food, we are subject to many bodily ills. We find that the average number of doctors per 10,000 population in the United States is 7.14. However, New York's proportion of doctors per 10,000 population is 11.3, whereas Alabama's is only 3.5. The Journal of the American Dental Association reports that there will be one dentist to every 2,500 of the civilian population by the end of 1943 as against a normal civilian ratio as of July 1940, of one dentist for every 1,835 persons.

For many years, just before Pearl Harbor, it seemed that the medical profession was becoming overcrowded. This was particularly a fact in towns and cities of over 10,000 population. The competition for the business of the sick was becoming keener every year. Consequently, the entrance requirements for many top-notch medical schools were elevated and the mediocre pre-medical students washed out ruthlessly.

As the late unpleasant depression proceeded along its meandering course, the total purchasing power of

the general public declined. The resultant of this was lower living standards and more deficient diets, adding of course to the total amount of acute and chronic illness in the population. While the total number of sick people increased, their purchasing power declined. This intensified competition among the doctors for the dwindling business of the sick, and the cry went out to limit the number of doctors.

It should be pointed out that the medical profession is no more to blame for this condition than any other minority group is to blame for conditions arising from normal Price System methods of operation.

Heavy recruiting of physicians and dentists is adding daily to the shortage of doctors for civilians, and the nation must be on constant guard against general epidemic disease. If the public health personnel and equipment and the medical and drugless

professions were designed as a function to operate at full load instead of continuing as individual enterprises, it would be possible virtually to eliminate most contagious diseases within 10 years.

America's medical men are efficient and overworked; so was the man who used to make steel by hand. Then came the technologist and designed a new process so that the steelmaker could make many more tons of better steel in a shorter day and work less hard. Our public health system needs a new social design.

We have the scientific knowledge to turn our human liabilities into assets; we also have the abundance necessary to insure it. But we must have a design for the use of this abundance, the skilled personnel and the scientific methods. Technocracy's Victory Program would insure such a design NOW.

'... economic principles (of the New Deal) have probably been rendered false by the advance in aviation technology and chemistry alone since Pearl Harbor. Maybe the inventors and the chemists will always keep so far ahead that politically and socially the rest of the people of the world will always be trying to build Utopias with economic and legislative tools which have lost their usefulness and upon premises which have long since ceased to be sound.'
—Phil S. Hanna, financial editor of the *Chicago Sun*, April 25, 1943.

Arch W. Shaw, who was chairman of the Conservation Division of the First World War, War Industries Board, had this to say in 1918:

'In peace times almost all industries become encumbered with a certain amount of unexamined tradition, which results in duplication of effort, waste of material and unnecessary expenditure of energy.'

Not one of the 8000 newspapers published in Soviet Russia carries crime news, comic strips, or gossip columns.

The Mystery of Money

By the Peripatetic Technocrat

Money Is Funny

Forty percent of the people in the U. S. are paying almost 63 percent of the income taxes and about 59 percent of *all* internal revenue collected by the government, Treasury figures showed on August 11, 1943. The 40 percent who bear the major tax load live in eight *highly industrialized* states, New York, Connecticut, Massachusetts, New Jersey, Pennsylvania, Ohio, Illinois and Michigan. The Treasury report showed that during the year the government collected \$10,464,768,688 in income taxes, of which \$5,943,916,979 was paid by individuals and \$4,520,851,709 by corporations. Income tax collections were up 65 percent over the preceding year and total internal revenue, which amounted to \$22,371,386,496, showed a 71 percent increase.

Headline in Philadelphia Inquirer of April 19:

'Treasury Offers Exchange of Debt Certificates.' At last money is recognized for what it was actually defined to be by Technocracy more than a decade ago . . . a debt certificate.

'Nobody but a candidate for an institution would be bothered counterfeiting money any more—it's too common!' — Howard Scott, September, 1942.

Now that it takes two kinds of 'money' to buy meat, the public mind has been completely clarified on one side of the delusion that money is wealth. No housewife believes that there would be one additional pound of meat in the butcher shop if her supply of red stamps were doubled. She's been to the shop and she sees that the ration stamps only serve as tools to divide up the stock. Four times the values of red ration stamps have been changed, but the quantity of meat available hasn't been affected in the slightest degree. But in some quarters the *old monetary delusion* persists. Certainly some people still think that a change of 'ceiling' money prices would give the consumers more meat. * * * If this were purely a physical problem, the idea would be dismissed because of Newton's law that action and reaction are equal and opposite. Because the monetary factor is introduced, however, some seem to think that the Newtonian law doesn't apply. But of course it does, because in the last analysis *producing* and *eating* meat are *physical* processes. The parallel monetary transactions cannot alter the mechanics of the thing.

Excerpts from *Chicago Daily News* editorial, July 12, 1943
(Italics ours).

Aluminum, Technology and War

by Oliver Moffatt, Jr.

THE United States alone is going to be able to produce annually more than half again as much aluminum as the entire world ever produced in a single year before the present war. This statement was made by C. C. Carr, in charge of public relations at the huge new government-owned aluminum plant at McCook, Illinois.

The occasion was a tour of inspection by a group of reporters, guests of the Aluminum Company of America, who *operate* the plant but do not own it—yet.

The reporters saw at first hand a sample of America's gigantic new technology—technology that is going to win the war, and that is also going to change the face of America after the war, but not the way the National Association of Manufacturers would have us believe.

Over \$25,000,000,000 of Government funds has gone into the nation's war plant expansion since the start of the defense program, in contrast to a little over \$4,000,000,000 financed by private corporations in the same period. This is borne out in Mr. Carr's statements with reference to the aluminum industry as reported in *The Austinite*, a weekly neighborhood paper, distributed on the west side of Chicago. From its August 11 issue we present some of Mr. Carr's reported statements.

Starting the week of August 1, 1943, said Mr. Carr, production of aluminum in *government-owned*, Alcoa-operated plants exceeded the metal produced in Alcoa's own plants. By the end of 1943 the aluminum production capacity of the United States will exceed 2,100,000,000 pounds annually, which is seven times the production of 1937. Of this 2,100,000,000 pounds annual production, over half, or three and one-half times 1937's production, will be produced in government-owned, Alcoa-operated plants; one-third, or two and one-third times 1937's production, will be produced in Alcoa's own plants, while the balance of this production will come from other government and privately owned plants operated by other private industrialists.

In contrast to these optimistic statements of Mr. Carr is a small news release from Washington, tucked away on an inside page of the *Chicago Daily Times* of August 13, 1943. It contained the following information:

Seven brand new aluminum plant units, able to turn out 21,000,000 pounds of this vital metal monthly have been idle for lack of manpower since their completion months ago, it was learned today at the War Production Board.

We certainly will not be able to meet that annual production rate so optimistically reported by Mr. Carr unless these units get into operation. They are not in operation because of lack of manpower, yet our fighting forces still lack the necessary airplanes to annihilate our enemies. Aluminum is the backbone of the airplane industry, and that industry did not meet its quota for June or July. Was this because of lack of aluminum or lack of manpower?

Yes! We'll Have No Expansion

In the summer of 1941 several airplane companies were forced to slow down on production because of lack of aluminum. This lack of aluminum was due to lack of production facilities. These facilities could have been provided for if an adequate aluminum plant expansion program had been undertaken at the start of the defense program in 1940. But no plants were built then. Why?

The answer is taken from a report that appeared in the *Nation* of May 24, 1941.

In May, 1940, said the *Nation*, when confronted with the certainty of an acute shortage, Arthur Davis of Alcoa refused to consider increasing capacity of aluminum output to one billion pounds a year, since so vast an expansion of capacity would lessen its scarcity and lower its price, even though it was proposed that the government should guarantee full protection to the company and that these 'emergency' plants should be closed down at the end of the war. Mr. Davis

felt that there was no cause for alarm, stating that in his opinion there was ample aluminum and that there would be no shortage.

That is just one more example of the criminal short-sightedness of business enterprise with regard to the national welfare.

The statements made by Mr. Davis reveal the operating characteristics of the Price System, the methods by which every business organization is forced to wage the war of private enterprise. The individual business man is not to be blamed for this because he is powerless to act in any other manner than that dictated by the rules of the game of the Price System. He couldn't remain in business otherwise. Buy cheap and sell dear, charge all the traffic will bear, through agreements and monopoly practices, or any other acceptable method, see that scarcity is *always* maintained and an abundance never created, because abundance destroys price.

Screaming from that statement and the resulting shortages that developed (from our self-imposed maintenance of an economy of scarcity), in all lines of the defense program during 1940, 1941 and most of 1942 is the answer to America's defeats suffered in the first 10 months of the war.

Some further statements on aluminum production and its uses, as contained in the newspaper article, give us a picture of the integration of America's industrial machine that must have a designed direction in order to operate at anywhere near top efficiency. These statements show the

integration between the aluminum industry, the electric power industry, the airplane industry, and other phases of our war effort.

To produce this 2,100,000,000 pounds of aluminum it will require more electric power than the total consumed in 27 states of the United States in 1940. It is estimated that 75 percent of the average weight of a war plane is made up of various aluminum parts. For example, 2 tons of every fighter plane is aluminum, 5 1-2 tons of every two-engine bomber, and 28 tons of every four-engine bomber.

In addition, a battleship may use over 1,000,000 pounds of aluminum and this metal is also widely used for ordnance, map-making, military camera equipment, field kitchen equipment, pontoon bridges, ration packaging, and for scores of other purposes vital to the prosecution of the war.

The McCook, Illinois, plant is a fabricating plant, making aluminum alloys for forgings, extrusions to be manufactured into airplane parts in a number of other plants in the United States, and its main job is the producing of vast quantities of aluminum sheet to provide the 'skin' for fighting planes. From this plant, huge continuous mill aluminum sheet can be rolled out on a run-out table over a city block long, at a rate that is 50 times faster than was possible with equipment in use before the war.

When contemplating this vast expansion in the aluminum industry because of the war, we find that this same production in times of peace, when the tremendous destruction of

the products of industry has ceased, would create an abundance, the bane of the Price System.

Abundance Assured—Almost

If we contemplate the vast industrial expansion in every line of endeavor connected with the war effort that has taken place across this nation in the last three years, we will find that they all closely parallel the aluminum industry.

America's technological future has almost been assured. We say almost assured because our future depends on our winning the war and the peace that is to follow.

Some of the industrial expansion is interesting to note, especially in the industries that are in competition with the aluminum industry for the marketing of their products. Pig-iron production for 1937 was approximately 35,000,000 tons; 1943's estimated production is 65,000,000 tons. There were 52,000,000 tons of steel produced in 1937; 1943's estimated production is 91,000,000 tons. Plastics was still an infant industry in 1937; 1943's plastic production, 600,000 tons, is many times 1937's output. Factory output, which, according to a chart prepared by the Alexander Hamilton Institute reached a peak, as compared to 1919, of 117 percent in 1929, 123 percent in 1937, stood at 217 percent in May 1943, and was still rising. 122,000,000,000 kilowatt-hours of electric power were produced in 1937; 1943's production is estimated to exceed 200,000,000,000 kilowatt-hours.

At the end of the war the North American Continent will be in possession of an immensely productive machine, and the controllers of that machine will be faced with the grim alternative of either throttling and dismantling it or of operating it at its current high level. In the event that it is throttled and dismantled the operators will be faced with the problem of 20,000,000 to 30,000,000 un-

employed. In the event that it is operated at its present high level the operators will be faced with the problem of distributing its output. Either of these situations will demand radical and revolutionary solutions in the sense that they will have to be wide departures from any of the current postwar plans of either business or government.

Fascism Is Where You Find It

'In my thinking, fascism is a dictatorship, and a dictatorship is an authority possessing irresponsible power for an indefinite period, an authority that cannot be ousted by any electoral or head counting process, but only by violence. As function fascism is an effort to freeze the economic crisis arising from the application of great technology, to freeze it by the pressure of military force sustained openly or tacitly by the middle classes.'

CHARLES A. BEARD, in the
Modern Monthly, Sep-
tember 1934.

'(I am) against any legislation that would freeze a worker on his job. Such a law would be manifestly unfair. If it should become necessary to freeze workers on their jobs, the employers must be deprived of profits from their services.'—Harry C. Bates, an A. F. of L. vice-president, before Senate Labor Committee.

International fascism is the exploitation to the nth degree of im-

perialism *without* its polished pretenses. (What it can't get with cartels, it reaches for by the force of arms.)

'Those who freeze progress to the status quo ante strangle the U. S. A. Obsolescence and technological displacement have made America what it is (or was).'*—Editorial in Farm Implement News, July 8, 1943.*

'I think there is evidence that when the struggle ends for the troops, it will begin for free enterprise.'

WILFRED SIKES, President of
Inland Steel Co. and Chair-
man of the Post-War Com-
mittee of the National Asso-
ciation of Manufacturers.

Every attempt to freeze the status quo into its present or past pattern is a contribution toward the extinction of our civilization on a Continental scale.

'When Adam dived and Eve span,
who was then the gentleman?'—Pop-
ular couplet—about 1375 A. D.

What Price Prophecy?

by Lilly Yngve

Men reject their prophets and slay them, but they love their martyrs and honor those whom they have slain.—Dostoyevsky.

ON the 14th of July 1921, an old battleship could be seen heaving up and down 75 miles out to sea off the coast of Virginia. It was an old German boat captured in the first world war. Now it was biding its fate, abandoned and alone.

Far above the ship a plane was circling. All of a sudden a few bombs were released from the plane. A series of terrific explosions occurred as the ship was struck and soon it disappeared below the surface. This was an historic event for the United States of America.

The man who was in command of the plane that in a few minutes demolished and sunk the old German battleship was Brigadier General William Mitchell.

He made another experiment on the 19th of July, letting smaller aircraft drop light bombs on another ship, but was not able to sink it. Navy inspectors boarded the ship and signaled that it was no use trying any more.

At that moment his big Martin bombers arrived carrying heavy bombs. They had to circle around until they were almost out of gas waiting for the Navy Inspectors to leave. When they finally got out of the way, pandemonium broke loose. With a few well directed hits Billy Mitchell was able to conclude his ex-

periment successfully. The ship was no more.

For years General Mitchell had been waiting for the time when he could prove his theory that airpower was superior to sea power. His conclusions were based on experiences and observations in the first World War. In the beginning aircraft had been used only for reconnaissance of enemy positions and territory. Later the plane became a combat arm, used both for attack and defense. Aircraft were thus used on the Western Front, and flying in formation was developed. Planes were also used in Naval operations, for patrolling coasts, protecting transports and merchant ships and combating submarines.

General Mitchell predicted that aviation would develop rapidly and soon assume a position of primary importance in our National Defense. But he was ignored and ridiculed. However Mitchell was persistent and vociferous. He wrote books and gave talks all over the United States. His theme was always that air power was superior to sea power and land power and should have its own command in the Armed Forces.

When Mitchell's intended experiment, related above, was publicized, it was considered so preposterous that one belligerent nincompoop said that he would be willing to stand on the

deck of any ship that Mitchell attempted to sink. It's a good thing for him that he wasn't there because people are usually not in a position to send regrets from Davy Jones' locker. The detonation of bombs at the sinking of that old German battleship could be heard around the world. But many were those who did not hear for their ears were stuffed with the cotton of old traditions and the shopworn glory of precedents.

Billy Mitchell also stated that 'He who controls Alaska controls the world.' This was an overstatement, but it focused attention on the fact that Alaska is vital to the defense of the North American Continent. He accused the politicians and brass hats of treason to America by holding back the development of aviation. For this unmitigated presumption he was court martialed and dismissed from the Army. His career was discredited and his vision ridiculed. Some time later he was taken sick and died. They said it was pneumonia; but others said that Billy Mitchell died of a broken heart. Before his death he told a friend that he was not sorry for what he had done in his life and would be willing to do it all over again to serve his country.

Since Mitchell's big day in 1921 American technology has taken tre-

mendous strides. Air power has advanced correspondingly. It has been found that of all naval units the aircraft carrier is the most vulnerable to attack from the air. The British Admiralty has admitted the folly of exposing warships to air power attacks in the North Sea. On March 3, 1943, American and Australian fighters and bombers smashed a Japanese convoy of 22 warships and troop transports in the Bismarck Sea. All were sunk or left sinking. These ships ranged from 500 to 12,000 tons. The rain of bombs and torpedoes left only a lone crippled Jap destroyer in the ocean, empty life boats and debris and Japs floating about in yellow life jackets.

This was a defeat of heavy sea power by overwhelming air power, a triumph indeed for Billy Mitchell. It also proved Howard Scott's statement that 'Men do not create events, events create men.' Although men have resisted new ideas and inventions through the ages the pressure of events has forced them to adapt themselves to the resulting changes. The question rises: How many lives, how many ships, how much materiel has America lost in learning only part of its lesson? How much more must we lose? Science is still being resisted, but the handwriting is on the wall.

According to the U. S. Census of 1940, 7 per cent of the nation's skilled male workers live in Illinois.

There are 4,949,132 skilled personnel in the country as a whole and

364,442 of them live in Illinois. America's skilled workers are largely concentrated in New York, New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Michigan and Wisconsin.

A Primer of Technocracy

THE CONCEPT OF WORK

by V. V. Spohn

Work Is Power Plus Time

THE word 'WORK' to the average individual today means nothing more than that which he does in order to make a living. Little thought is given to the methods of doing it today as compared with those methods employed by our ancestors. Before comparison of the methods of doing work years ago, with those of today, it is well to know how work is done.

It is accomplished by the conversion of energy through the medium of an energy converting device, such as the human body or steam and gasoline engines. The rate at which work is done is determined by the rate that energy is converted by the conversion device, whether mechanical or human.

Work was performed in primitive times by the human body, with the aid of a few domesticated animals. The result was that the people of those times were in continual want and poverty, directly due to the fact that man's biological structure only allowed him to convert energy at a limited rate, thus doing a limited amount of work. Since work is that which accomplishes the production of all goods, shelter, etc., it is only natural that with his limited ability to convert energy into work, man could produce nothing more than a bare existence for himself.

**'What did work ever do for you?
Look in the mirror sometime.'**

Advancing civilization made many changes in the methods of doing work. The sailing vessel, the wind-mill, the water wheel and, finally, steam and gasoline engines were introduced. All these devices increased man's ability to produce and transport goods. We must keep in mind, however, that these devices were *non-human* energy converters and the extent to which they aided in the production and transportation of goods was like a gift to the people of that time.

The use of non-human, or extraneous energy, has increased rapidly in the past 150 years. A bushel of wheat, a ton of coal, a radio, a necktie or a toothpick can be produced with less *human* effort today than ever before. We of today fail to realize the extent of the displacement of human effort caused by the use of this extraneous energy and also fail altogether to comprehend the ultimate result of this displacement. We all know that we live in what is called the Power Age, but the full implication of the advent of power is unknown to most people today. The use of extraneous energy and the application of technology has placed the people of the North American Continent on the verge of the

greatest social change that has ever taken place on earth.

Our present social system, the Price System, was born during the days of production by manpower. Manpower never could, and never will, produce anything more than a scarcity of goods, to be distributed by the method of exchanging manhours for purchasing power. Technology is destroying the very principle of operation of the Price System: first, by displacing man-hours, making it impossible to distribute sufficient purchasing power to maintain the system; and, second, by producing an abundance of goods instead of scarcity, thus destroying all value which the Price System requires for operation. Careful consideration of these two phases of technological operation should be undertaken by all people likely to be affected.

The first phase deals with the elimination of man-hours by technology. To correctly analyze this, *man-hours* must be considered and not the *number* of people employed. Man-hours per unit of production gives the complete story of technological displacement. This subject is covered by the report of the committee appointed by the United States Congress to investigate the condition. The committee was called the Temporary National Economic Committee. The findings of this committee were never published at any length in the newspapers or magazines, but can be secured from the Government Printing Office at Washington.

The report of this committee shows

a continual reduction in man-hours per unit of production. For instance, 100 years ago, it required 12 man-hours to mine a ton of coal, while today it is being done in 15 minutes. This improvement in coal mining is responsible for the elimination of 272,000 miners from the payroll. Steel displacement has been as high as 97 percent, according to the committee. It winds up its report by saying that technological displacements always find employment elsewhere, *but fails to state where.*

The second phase, that which deals with the production of an abundance of goods rather than scarcity, can easily be realized when we consider that less than half of our people are producing goods and services. Yet we export a part of our goods produced, and in peacetimes destroyed another part, in order to maintain values which are determined by the scarcity of the commodity.

To illustrate, we mention the plight of the farmer and the citrus grower, who after a bumper crop discovers to his dismay that the selling price is less than the cost of production and transportation. He, therefore, allows his crop to rot on the ground rather than suffer loss. Scarcity for the people of North America is soon to be a thing of the past, together with the ox-cart and the shovel.

Who Wants to Work, Anyway?

Prior to our war program, we on the North American Continent had one billion, six hundred million horsepower of prime movers in operation.

It is much more now. Each horsepower of these work producers will do work equivalent to that of 30 men on a 24-hour basis. Without realizing it, we have reached a situation that makes it *impossible* for all of our employable people to find employment in the production and distribution of goods which under normal circumstances we would consume.

We are a people fortunate to have 59 percent of the world's resources, 78 percent of the technological equipment and 73 percent of the graduate engineers of the world.

Our intelligence must be questioned if we utilize these advantages at anything less than one hundred percent. The full orchestration of men, materiel and equipment would produce for the people of North America a standard of living far in excess of anything yet achieved by man.

For years we have been told by both the printed and spoken word that *unemployment* is the *number one problem* in this country. This is an absolute falsehood, and proves only that the author of the phrase is still convinced that human effort produces goods.

The production and distribution of goods and services in quantities great enough to supply all the needs of all of our people, including our Armed Forces, is now the number one problem.

'Shall we be more tender with our dollars . . . than with the lives of our sons.'—Wm. G. McAdoo, Secretary of Treasury, World War I.

Since technology has proven itself to be a better and faster producer of goods than the human being, why not face the fact that the man of tomorrow will be a man who does a minimum of work but has a maximum of goods and leisure time. When the immediate need for our Armed Forces is over, when our defense has been accomplished, and the technology that is being built today is put into operation, is it conceivable that there will be employment for all our people, when today we are producing goods and services at the rate of \$60,000,-000,000 a year for a world at war, with millions of men in the armed forces?

Mechanically, the people of America are far advanced over the rest of the world; socially, not so. We today are the most favored people on earth and yet we destroy a large part of our production to maintain a horse-and-buggy system that is designed to distribute the scarcity of goods that manpower produces. Science applied to the productive methods of North America has made a potential abundance that is hard to conceive. The further application of science to our *distribution* system will be necessary before this abundance can be made available to our people.

'Great things do not happen merely because they are good ideas. They happen when they are unavoidable.'

SAMUEL GRAFTON,
Chicago Sun,
July 14, 1943.

Technology Marches On

MAN-HOURS PER UNIT MUST DECLINE

by Research Division 8741-1

Mass Production or 'Continuous' Production

'Man-hours' and 'technology,' terms introduced to the public by Technocracy a decade ago, are included now in almost every speech over the radio, in editorials, advertisements, and popular magazine articles. Business is now rightly taking pride in how it has cut man-hours per unit of airplane produced, by employing more technology instead. Here are some recent figures:

Take the Liberator (B-24) bomber, whose 17 tons includes 102,000 separate parts—not including 85,000 nuts and bolts and 400,000 rivets, EACH one of which is put on by hand.

The increases in deliveries of Liberators and Liberator Expresses at Ft. Worth amounted to 490 percent with a personnel increase of only 96 percent. (This for the period November 1942, to May this year.)

At our San Diego division, deliveries of Liberators, Catalinas, and Coronados increased 31 percent in spite of a decrease of personnel amounting to 2 percent.

At the Stinson division at Wayne, Mich., production of 'Flying Jeep' liaison planes and Sentinel navigational trainers has

increased during the six-month period 1,800 percent with a personnel increase of only 70 percent.

—Harry Woodhead, president, Consolidated Vultee Aircraft Corp., September 5, 1943.

Industrial engineers have cut the production time on medium (2-engine) bombers from the 70,000 it required to turn out the initial planes, to 13,000 man-hours.

—Col. Lewis Sanders, chief of employment, division of Selective Service, February 26, 1943.

Man-hours per Liberator bomber have been cut from 100,000 to 30,000.

—*Chicago Sun*, September 21, 1943.

In construction of the Flying Fortress (B-17) at the Long Beach plant, for every 100 employees required in June 1942, the company needed only 47 workers in January this year, 29 in May, and 21 in June. . . .

For every 100 employees of . . . labor required at Santa Monica to build an A-20 attack-bomber in October 1940, the company used 33 men in January 1941, just 13 in June of 1941, and by July of this year

used only 9 workers on the same job.

—Donald W. Douglas, president, Douglas Aircraft Corp., September 21, 1943.

Remember, these are only the planes we are now striving to win the war with. Man-hours per plane are approaching the low limit set by the hand-tool methods being used, and it

will not be until we turn them out in *continuous* production, rather than the now outmoded 'mass-production' way, that man-hours can get anywhere near the zero mark and we can turn out bombers so fast that they will be measured in 'kilowatt-hours' instead of man-hours. What is more, they'll be larger and have more bomb capacity.

TECHNOLOGY MARCHES ON.

No Moratorium On Science

The Rockefeller Foundation has developed a 'thinking machine' or mechanical brain, now working night and day on vital war problems. The cost was \$130,500. This includes oiling, dusting, repairs and general upkeep—a small price to pay for a dependable, unbiased, super-efficient calculator which solves in minutes problems that would take expert mathematicians months or years. This mechanical mind which can out-think a battalion of Einsteins is a device for 'the solution of obscure differential equations' involving as many as six variable quantities. The machine is neither Republican nor Democratic, neither liberal nor conservative. Draw a red herring across its field and you still get the same answer. . . .

'In laboratories throughout the land investigations are going on behind closely guarded doors which may at any instant revolutionize the course of the war. The nucleus of such a *technological high command*,

if maintained active during peacetime, probably will constitute democracy's best assurance against a future Hitler.'—Dr. Charles Allen Thomas, Research Director for the Monsanto Chemical Co.

A new device automatically radios the performance of 70 different parts of a plane during a test flight to a ground machine which records the data on sound film and discs, and then makes graphs for visual study in a matter of seconds. It not only enables the ground men to warn pilots of incipient trouble, but its records supplement those of the pilot and are not lost in case of a crack-up.

Modern blast furnaces are bigger and better than they used to be but there are fewer of them. Last year 242 blast furnaces had a record-breaking capacity of nearly 64,000,000 tons. In 1913 there were almost twice as many furnaces but their capacity was only 48,500,000 tons.

Technocracy and Your Trade

ELECTRIC POWER AND EMPLOYMENT

by R. F. Novalis

THE all-time highs in the output of kilowatt-hours of electricity this year in the United States are having at least three effects.

First, they are being used to power the machines that are turning out munitions and materiel to destroy world fascism. Some, of course, is being wasted in unnecessary advertising signs. Some is being used in essential civilian power uses.

At the same time, every kilowatt-hour going out over the high-tension wires has two other effects.

The more electricity we use on farms, in factories and in mines, the less man-hours are needed. That is no mere opinion. The August monthly report of the U. S. Census Bureau states that:

Employment . . . for the first time since Pearl Harbor failed to show an increase over the corresponding month of the previous year.

Not only that, the report showed a decline of 400,000 persons employed in the U. S. from July to August *this year*. It was noted that the war on unemployment has already been fought and was lost this spring . . . it has already passed its minimum and is now *increasing!* Of course, this is nothing to be alarmed about now, as long as the war continues. The bottom, with

probably the least unemployment since World War I, was reached with 900,000 out of work in April and May this year. In August it had started moving upward again, and was past the million mark.

At the same time that employment started to decrease for the first time in 20 months, and unemployment consequently began to rise again, electric power commenced flowing into the nation's machinery in faster quantities than it ever had before. *Power* was catching up with the man-hours squandered by war production. We are now using more electric power, and less manpower, than previously, to gain headway in the production race against the Axis.

Electricity output hit *a new all-time high for the seventh consecutive time in eight weeks*, the week of September 4, according to the Edison Electric Institute. National output that week, highest in our history, was 4,350,511,000 kilowatt-hours.

When it is realized that the average weekly output in 1932 was only 1,600,000,000 kilowatt-hours and that in 1939, last pre-war year, the average was 2,500,000,000 kilowatt-hours, it is apparent how power from coal, oil, gas and water is responsible for our increased industrial output in this national crisis.

The Axis* is feeling the effects, not of our electricity itself, but the lightning-like bolts of shells, bullets and bombs hurled from equipment made by that power.

The overall manpower shortage at home is being eased by the use of more power, power not derived from human toil.

What completes this picture of American technology is the fact, too often overlooked, that in producing more electric power we have been employing more of the newly-installed generators and turbines that are more efficient than the old ones they replace. Unemployment, however, has hit the electric power industry! The all-time high point of total number of men employed in the electric power utilities industries was reached back in 1930, and has been on the downgrade every year since. Last year,

*Japan, with 26.7 billion kilowatt-hours, and Germany with 49 billion, in 1937 together produced exactly one-half of the U. S. total of 151 billion that year—last world figures which are accurate. 'Power' Sept. 1943.

Employment in the United States reached an all-time peak of 54,300,000 persons during the week ending July 10, 1943, the Census Bureau reported. That was an increase of 900,000 over the number employed early in June. *The number of unemployed did not change from the 1,200,000 reported in June, because the additional workers were drawn from the ranks of students at the close of the school year, the Bureau said. The record employ-*

under pressure of power output, double that of 1930, employment had crept up to 10 percent of that peak, but it has been falling monthly since then.

Yes, we have been able to produce 70 percent more electricity since 1939 with 20 percent fewer employes in the industry. This information is furnished by J. A. Krug, Director of the Office of War Utilities. He estimates that this year we will produce 221 billion kilowatt-hours, while in 1939 we produced only 130 billion.

Electric utility total employment four years ago averaged 300,000, and this summer it was down to 240,000, Krug stated. The Edison Electric Institute, spokesman for the financial superstructure of the utilities, goes the administrator one better and puts July 1943 employment at only 220,000.

Any way you look at them, the figures prove that we *are* making better progress than ever—the American way—with *electric* power.

ment in July was 300,000 persons above the previous peak of 54,000,000 which was reached in July, 1942. There was an *increase* of 3,000,000 over a year ago in the *number of women* employed in July; number of men employed decreased by 2,600,000 during the year as male workers were called to the Armed Forces.

The future belongs to those who prepare for it.

The large meeting hall of Section 15, R. D. 8141, Technocracy Inc. at Cleveland, Ohio, was recently jammed to capacity by an audience, largely composed of women. They came to hear Alice Langan the Assistant Editor of *Great Lakes Technocrat*, who is also one of the Technocracy's authorized women speakers. She was brought there from Chicago by the Cleveland Section to speak on 'A Woman's Viewpoint of the War and Permanent Peace.' The meeting was arranged and conducted by the women Technocrats of Cleveland. The question period revealed that the audience agreed with the speaker's analysis of America's organized confusion. When it came to the audience response to the need for Total Conscription, the speaker's question evoked a sea of up-raised hands.

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For copies of GREAT LAKES TECHNOCRAT and other literature, and for information regarding meetings and activities of Technocracy Inc., in the Great Lakes area the following Section addresses will be helpful.

8040-1—204 Columbia Bldg., Pittsburgh, Pa.

8040-2—Box 356, Ambridge, Pa.

8040-3—340 Brighton Ave., Rochester, Pa.

8041-1—1613 East 51st St., Ashtabula, Ohio.

8141-2—Commercial Bldg., 2056 E. 4th St. Cleveland, Ohio.

8141-3—38 South High St., Akron, Ohio.

8141-4—2237 Front St., Cuyahoga Falls, Ohio.

8141-7—501½ Tuscarawas St., Barberton, Ohio.

8141-14—P. O. Box 545, Ravenna, Ohio.

8141-15—12516 Shaw Ave., Cleveland, Ohio.

8240-1—207 N. Washington St., Galion, Ohio.

R. D. 8242—c/o Arthur C. Clayton, Marine City, R. No. 1, Mich.

R. D. 8242—c/o John Reynolds, St. Clair, R. No. 2, Mich.

8339-2—302 N. Clairmont Ave., Springfield, Ohio.

8341-1—2276 Putnam St., Toledo, Ohio.

8342-1—9108 Woodward Ave., Detroit, Mich.

8342-2—1610 N. Saginaw St., Flint 4, Mich.

8342-2—615 Peoples State Bldg., Pontiac, Mich.

8439-1—P. O. Box 81, Station A, Dayton, Ohio.

R. D. 8641—916 E. Corby Blvd., South Bend, Ind.

8743-1—735 N. Water St., Milwaukee, Wis.

8844-1—217½ Pine St., Green Bay, Wis.

8844-2—1208 N. Richmond St., Appleton, Wis.

8844-3—135 Van St., Neenah, Wis.

9038-1—4518 Delmar Blvd., St. Louis, Mo.

R. D. 9041—1427—39th St., Rock Island, Ill.

9344-1—114 South 7th St., Minneapolis, Minn.

9439-1—817 Walnut St., Kansas City, Mo.

9648-1—Route 1, Box 2, Warren, Minn.

TECHNOCRACY

WHAT?

WHAT?

★ Technocracy is the only American social movement with an American program which has become widespread in America. It has no affiliation with any other organization, group or association either in America or elsewhere.

★ The basic unit of Technocracy is the chartered Section consisting of a minimum of 25 members and running up to several hundred.

★ It is not a commercial organization or a political party; it has no financial subsidy or endowment and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are \$5.00 which are paid by the member to his local Section.

★ Members wear the chromium and vermillion insignia of Technocracy—the Monad, an ancient generic symbol signifying balance.

WHERE?

★ There are units and members of Technocracy in almost every State, and in addition there are members in Alaska, Hawaii, Panama, Puerto Rico and in numerous other places with the Armed Forces.

★ Members of Technocracy are glad to travel many miles to discuss Technocracy's Victory Program with any interested people and Continental Headquarters will be pleased to inform anyone of the location of the nearest Technocracy unit.

WHERE?

WHEN?

WHEN?

★ Technocracy originated in the winter of 1918-1919 when Howard Scott formed a group of scientists, engineers and economists that became known in 1920 as the Technical Alliance—a research organization. In 1930 the group was first known as Technocracy. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934, Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundations of the present nation-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHO?

★ Technocracy was built in America by Americans. It is composed of American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this country. Membership is open only to American citizens. Aliens, Asiatics and politicians are not eligible. (By politicians is meant those holding elective political office or active office in any political party.)

★ Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher or housewife—as long as you are a patriotic American—you are welcome in Technocracy.

**Great Lakes Technocrat,
306 W. Randolph Street,
Chicago 6, Illinois**

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Technocracy's Record

Technocracy was long aware of the potentialities of European and Asiatic fascist expansionism and as it became evident that the long anticipated struggle was developing Technocracy turned its attention more and more to the immediate problem of national security.

In home defense activities, Technocracy has participated to the full. Our Section Headquarters have been used for Selective Service registrations, for first aid classes, and air raid warden work. Technocracy's mobile sound units are used by police and fire departments.

Technocracy was the first organization in America to protest against the use of the fascist-type of extended arm salute in our schools and public gatherings and to urge the adoption of the military style of salute for all occasions.

Technocracy demanded conscription prior to the passage of the Selective Service Act.

Technocracy proposed the acquisition of Atlantic bases long before they were acquired from Britain for destroyers.

Technocracy has protested

for years against the shipment of metals and oil to Germany, Italy, Spain, Japan and other countries.

In August 1938, Technocracy presented specifications for the Army, Navy, and Airforce to repel any attempted attack from Atlantic or Pacific, and charged that the military budget of the United States was inadequate.

In September 1939, Technocracy demanded the development of a Continental strategy and the planned generalship of all Continental operations for the security of America.

In July 1940, Technocracy demanded Total Conscription by the Government of the United States of Men, Machines, Materiel, and Money with National Service from All and Profits to None.

On December 7, 1941, Howard Scott, Director-in-Chief of Technocracy, sent a telegram to President Roosevelt in the name of the Organization placing the entire personnel and equipment of Technocracy Inc. at the disposal of the Commander-in-Chief and pledging the unqualified support of Technocracy to the Administration's war effort.